

Contents

1	Integration of Selective Membranes in Chemical Processes: Benefits and Examples	1
	Luigi Marrelli, Marcello De Falco and Gaetano Iaquaniello	
2	Pd-based Selective Membrane State-of-the-Art	21
	A. Basile, A. Iulianelli, T. Longo, S. Liguori and Marcello De Falco	
3	Hydrogen Palladium Selective Membranes: An Economic Perspective	57
	G. Iaquaniello, A. Borruto, E. Lollobattista, G. Narducci and D. Katsir	
4	Membrane Reactors Modeling	79
	Marcello De Falco	
5	Membrane Integration in Natural Gas Steam Reforming.	103
	Marcello De Falco	
6	Autothermal Reforming Case Study	123
	Paolo Ciambelli, Vincenzo Palma, Emma Palo and Gaetano Iaquaniello	
7	Technical and Economical Evaluation of WGSR	143
	Paolo Ciambelli, Vincenzo Palma, Emma Palo, Jan Galuszka, Terry Giddings and Gaetano Iaquaniello	
8	Membrane-Assisted Catalytic Cracking of Hydrogen Sulphide (H₂S)	161
	Jan Galuszka, Gaetano Iaquaniello, Paolo Ciambelli, Vincenzo Palma and Elviroso Brancaccio	

9 Alkanes Dehydrogenation	183
Moshe Sheintuch and David S. A. Simakov	
10 Steam Reforming of Natural Gas in a Reformer and Membrane Modules Test Plant: Plant Design Criteria and Operating Experience	201
Marcello De Falco, G. Iaquaniello and A. Salladini	
11 Future Perspectives	217
Marcello De Falco, Gaetano Iaquaniello and Luigi Marrelli	
About the Editors	225
About the Contributors	227
Index	233